

AMENDMENTS TO THE CLAIMS

1 (Currently Amended) An encrypting apparatus for encrypting at least one of encoded image data, audio data, and text data, said encrypting apparatus comprising:

a file reading unit operable to obtain a file which has a data section including the at least one of encoded image data, audio data, and text data and a header section including a header of the data section;

a data structure holding unit, which is a memory operable to store data access information;

an encrypting unit operable to encrypt at least one of the encoded image data, audio data, and text data included in the data section of the file using data access information from the data structure holding unit;

a header analyzing unit operable to analyze the header section of the file and to obtain a first value, the first value being stored ~~described~~ in a field ~~that is~~ included in the header section ~~to show~~ and indicating an encoding method used for data to be encrypted by said encrypting unit, the header analyzing unit being further operable to output data access information;

a header converting unit operable to convert the ~~first obtained~~ value into a second value according to a predetermined conversion rule, the second value having a size such that the second value is storable within the field included in the header section, the second value indicating the encoding method of the encoded data stored in the data section and information regarding the encryption of the data section performed by said encrypting unit, and the header converting unit being further operable to replace the ~~first value stored~~ ~~described~~ in the field included in the header section with the ~~second converted~~ value; and

a file outputting unit operable to output a file having a header section including a field in which the second value is stored ~~has been replaced~~ and a data section including the encrypted data.

2 (Currently Amended) The encrypting apparatus according to Claim 1,

wherein said header converting unit is operable to convert the first~~obtained~~ value through a bit inversion.

3 (Currently Amended) The encrypting apparatus according to Claim 2,
wherein said header converting unit is operable to change a bit position in the first~~obtained~~ value at which the bit inversion is to be performed, according to an encrypting method used by said encrypting unit.

4 (Original) The encrypting apparatus according to Claim 2,
wherein said header converting unit is operable to change a bit inversion formula to be used for the bit inversion, according to an encrypting method used by said encrypting unit.

5 (Currently Amended) The encrypting apparatus according to Claim 1,
wherein the conversion rule is represented by a conversion table in which the first~~obtained~~ value is recorded in association with the second~~converted~~ value.

6 (Currently Amended) A decrypting apparatus for decrypting encrypted data, the encrypted data being at least one of encoded image data, audio data, and text data, said decrypting apparatus comprising:

a file reading unit operable to obtain a file which has a data section including the at least one of encoded image data, audio data, and text data and a header section including a header of the data section;

a data structure holding unit, which is a memory operable to store data access information;

a header analyzing unit operable to analyze the header section of the file and to obtain a first value, the first value being stored~~described~~ in a field~~that is~~ included in the header section ~~to show and indicating~~ an encoding method used for the encrypted data and information regarding encryption, the header analyzing unit being further operable to output data access information;

a header converting unit operable to convert the first~~obtained~~ value into a second value according to a predetermined conversion rule, the second value having a size such that the second value is storable within the field included in the header section, the second value indicating only the encoding method, and the header converting unit being further operable to replace the first value stored~~described~~ in the field included in the header section with the second~~converted~~ value;

a decrypting unit operable to decrypt the encrypted data out of the at least one of encoded image data, audio data, and the text data included in the data section of the file using data access information from the data structure holding unit; and

a file outputting unit operable to output a file having a header section including a field in which the second value is stored~~has been replaced~~ and a data section including the decrypted data.

7 (Currently Amended) The decrypting apparatus according to Claim 6, wherein said header converting unit is operable to convert the first~~obtained~~ value through a bit inversion.

8 (Currently Amended) The decrypting apparatus according to Claim 7, wherein said header converting unit is operable to change a bit position in the first~~obtained~~ value at which the bit inversion is to be performed, according to the information regarding the encryption.

9 (Original) The decrypting apparatus according to Claim 7, wherein said header converting unit is operable to change a bit inversion formula to be used for the bit inversion, according to the information regarding the encryption.

10 (Currently Amended) The decrypting apparatus according to Claim 6, wherein the conversion rule is represented by a conversion table in which the first~~obtained~~ value is recorded in association with the second~~converted~~ value.

11 (Currently Amended) A data reproducing apparatus for decrypting and decoding encrypted data for reproduction, the encrypted data being at least one of encoded image data, audio data, and text data, said data reproducing apparatus comprising:

a file reading unit operable to obtain a file which has a data section including the at least one of encoded image data, audio data, and text data and a header section including a header of the data section;

a data structure holding unit, which is a memory operable to store data access information;

a header analyzing unit operable to analyze the header section of the file and to obtain a first value, the first value being stored-described in a field ~~that is~~ included in the header section ~~to show~~ and indicating an encoding method used for the encrypted data and information regarding encryption, the header analyzing unit being further operable to output data access information;

a header converting unit operable to convert the first obtained value into a second value according to a predetermined conversion rule, the second value having a size such that the second value is storable within the field included in the header section, the second value indicating only the encoding method, and the header converting unit being further operable to replace the first value stored-described in the field included in the header section with the second converted value;

a decrypting unit operable to decrypt the encrypted data out of the at least one of encoded image data, audio data, and the text data included in the data section of the file using data access information from the data structure holding unit; and

a decoding unit operable to determine the encoding method used for the data by reference to the field in which the second value has been replaced and to decode the decrypted data.

12 (Currently Amended) The data reproducing apparatus according to Claim 11,

wherein said header converting unit is operable to convert the first obtained value through a bit inversion.

13 (Currently Amended) The data reproducing apparatus according to Claim 12, wherein said header converting unit is operable to change a bit position in the first~~obtained~~ value at which the bit inversion is to be performed, according to the information regarding the encryption.

14 (Original) The data reproducing apparatus according to Claim 12, wherein said header converting unit is operable to change a bit inversion formula to be used for the bit inversion, according to the information regarding the encryption.

15 (Currently Amended) The data reproducing apparatus according to Claim 11, wherein the conversion rule is represented by a conversion table in which the first~~obtained~~ value is recorded in association with the second~~converted~~ value.

16 (Currently Amended) An encrypting method of encrypting at least one of encoded image data, audio data, and text data, comprising:

a file reading step of obtaining a file which has a data section including the at least one of encoded image data, audio data, and text data and a header section including a header of the data section;

an encrypting step of encrypting at least one of the encoded image data, audio data, and text data included in the data section of the file;

a header analyzing step of analyzing the header section of the file and obtaining a first value, the first value being stored~~described~~ in a field ~~that is included~~ in the header section ~~to show~~and indicating an encoding method used for data to be encrypted in said encrypting step;

a header converting step of converting the first~~obtained~~ value into a second value according to a predetermined conversion rule, the second value having a size such that the second value is storable within the field included in the header section, the second value indicating the encoding method of the encoded data stored in the data section and information regarding the encryption of the data section performed in said encrypting step, and replacing the

first value stored~~described~~ in the field included in the header section with the second~~converted~~ value; and

a file outputting step of outputting a file having a header section including a field in which the second value is stored~~has been replaced~~ and a data section including the encrypted data.

17 (Currently Amended) A decrypting method of decrypting encrypted data, the encrypted data being at least one of encoded image data, audio data, and text data, said decrypting method comprising:

a file reading step of obtaining a file which has a data section including the at least one of encoded image data, audio data, and text data and a header section including a header of the data section;

a header analyzing step of analyzing the header section of the file and obtaining a first value, the first value being stored~~described~~ in a field ~~that is~~ included in the header section ~~to show~~and indicating an encoding method used for the encrypted data and information regarding encryption;

a header converting step of converting the first~~obtained~~ value into a second value according to a predetermined conversion rule, the second value having a size such that the second value is storable within the field included in the header section, the second value indicating only the encoding method, and replacing the first value stored~~described~~ in the field in the header section with the second~~converted~~ value;

a decrypting step of decrypting the encrypted data out of the at least one of encoded image data, audio data, and the text data included in the data section of the file; and

a file outputting step of outputting a file having a header section including a field in which the second value is stored~~has been replaced~~ and a data section including the decrypted data.

18 (Currently Amended) A data reproducing method of decrypting and decoding encrypted data for reproduction, the encrypted data being at least one of encoded image data, audio data, and text data, said data reproducing method comprising:

a file reading step of obtaining a file which has a data section including the at least one of encoded image data, audio data, and text data and a header section including a header of the data section;

a header analyzing step of analyzing the header section of the file and obtaining a first value, the first value being stored~~described~~ in a field ~~that is~~ included in the header section ~~to show~~and indicating an encoding method used for the encrypted data and information regarding encryption;

a header converting step of converting the first~~obtained~~ value into a second value according to a predetermined conversion rule, the second value having a size such that the second value is storable within the field included in the header section, the second value indicating only the encoding method, and replacing the first value ~~stored~~described in the field included in the header section with the second~~converted~~ value;

a decrypting step of decrypting the encrypted data out of the at least one of encoded image data, audio data, and the text data included in the data section of the file; and

a decoding step of determining the encoding method used for the data by reference to the field in which the second value has been stored~~replaced~~ and decoding the decrypted data.

19 (Currently Amended) A program executed in a computer for an encrypting apparatus which encrypts at least one of encoded image data, audio data, and text data, said program causing a computer to execute:

a file reading step of obtaining a file which has a data section including the at least one of encoded image data, audio data, and text data and a header section including a header of the data section;

an encrypting step of encrypting at least one of the encoded image data, audio data, and text data included in the data section of the file;

a header analyzing step of analyzing the header section of the file and obtaining a first value, the first value being stored-described in a field that is included in the header section to show and indicating an encoding method used for data to be encrypted in said encrypting step;

a header converting step of converting the first obtained value into a second value according to a predetermined conversion rule, the second value having a size such that the second value is storable within the field included in the header section, the second value indicating the encoding method of the encoded data stored in the data section and information regarding the encryption of the data section performed in said encrypting step, and replacing the first value stored-described in the field included in the header section with the second converted value; and

a file outputting step of outputting a file having a header section including a field in which the second value is stored ~~has been replaced~~ and a data section including the encrypted data.

20 (Currently Amended) A program executed in a computer for a decrypting apparatus which decrypts encrypted data, the encrypted data being at least one of encoded image data, audio data, and text data, said program causing a computer to execute:

a file reading step of obtaining a file which has a data section including the at least one of encoded image data, audio data, and text data and a header section including a header of the data section;

a header analyzing step of analyzing the header section of the file and obtaining a first value, the first value being stored-described in a field that is included in the header section to show and indicating an encoding method used for the encrypted data and information regarding encryption;

a header converting step of converting the first obtained value into a second value according to a predetermined conversion rule, the second value having a size such that the second value is storable within the field included in the header section, the second value indicating only the encoding method, and replacing the first value stored-described in the field included in the header section with the second converted value;

a decrypting step of decrypting the encrypted data out of the at least one of encoded image data, audio data, and the text data included in the data section of the file; and

a file outputting step of outputting a file having a header section including a field in which the second value is stored~~has been replaced~~ and a data section including the decrypted data.

21 (Currently Amended) A program executed in a computer for a data reproducing apparatus which decrypts and decodes encrypted data for reproduction, the encrypted data being at least one of encoded image data, audio data, and text data, said program causing a computer to execute:

a file reading step of obtaining a file which has a data section including the at least one of encoded image data, audio data, and text data and a header section including a header of the data section;

a header analyzing step of analyzing the header section of the file and obtaining a first value, the first value being stored~~described~~ in a field ~~that is~~ included in the header section ~~to show and indicating~~ an encoding method used for the encrypted data and information regarding encryption;

a header converting step of converting the first obtained value into a second value according to a predetermined conversion rule, the second value having a size such that the second value is storable within the field included in the header section, and indicating only the encoding method, and replacing the first value stored~~described~~ in the field included in the header section with the second converted value;

a decrypting step of decrypting the encrypted data out of the at least one of encoded image data, audio data, and the text data included in the data section of the file; and

a decoding step of determining the encoding method used for the data by reference to the field in which the second value has been stored~~replaced~~ and decoding the decrypted data.

22 (Currently Amended) A computer-readable recording medium on which a file that is encrypted using the encoding method of Claim 16 is recorded, said file including:

data section which includes encrypted data, the encrypted data being at least one of encoded image data, audio data, and text data; and

header section which includes a header of the data section,

wherein the header section includes a field showing an encoding method used for the encrypted data and information regarding encryption.